

COORDINATION OF FIELD DEVICE OPERATIONS WITH OVERRIDES AND BYPASSES WITHIN A PROCESS CONTROL AND SAFETY SYSTEM

ABSTRACT

A process control or safety instrumented system uses function block logic to coordinate the logic within the process control or safety instrumented system with operational states of field devices, even when these operational states are initiated externally to the process control or safety system. Logic within input or voter function blocks associated with field devices may monitor and determine when the associated field devices are being put into testing or calibration modes and may automatically initiate appropriate bypass or override functionality in response to such detected field device configuration states. Likewise, the function block logic may automatically remove the bypass or override functionality when the field devices are placed back into their normal operational configuration states. This automatic initiation of bypasses and overrides helps to prevent a safety system within a process plant from initiating a shut-down procedure as a result of a device test initiated manually by, for example, a hand-held device attached to a field device. Likewise, the automatic removal of bypasses and overrides helps to prevent a safety system within a process plant from failing to operate properly because a user forgot to manually remove a bypass or override that was set up to allow a device test.